

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PHNL040205WO	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/IB2005/050496	International filing date ( <i>day/month/year</i> ) 08 February 2005 (08.02.2005)	Priority date ( <i>day/month/year</i> ) 23 February 2004 (23.02.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant KONINKLIJKE PHILIPS ELECTRONICS N.V.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
  2. This REPORT consists of a total of 6 sheets, including this cover sheet.
- In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 30 August 2006 (30.08.2006)  Authorized officer  <div style="text-align: center; font-weight: bold;">Cecile Chatel</div>  e-mail: pt13@wipo.int
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Form PCT/IB/373 (January 2004)

# PATENT COOPERATION TREATY

REC'D 16 FEB 2006

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From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/B2005/050496

International filing date (day/month/year)  
08.02.2005

Priority date (day/month/year)  
23.02.2004

International Patent Classification (IPC) or both national classification and IPC  
G03F7/20

Applicant  
KONINKLIJKE PHILIPS ELECTRONICS N.V.

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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NL-2280 HV Rijswijk - Pays Bas  
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/050496

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**Box No. 1 Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IB2005/050496

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or  
Industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	2,3,5,6,8,9
	No: Claims	1,4,7,10-12
Inventive step (IS)	Yes: Claims	2,3,5,6,8,9
	No: Claims	1,4,7,10-12
Industrial applicability (IA)	Yes: Claims	1-12
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

1. Reference is made to the following document:  
D1: US 2001/053489 A1
2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1, 10 - 12 is not new in the sense of Article 33(2) PCT.
  - 2.1 The document D1 discloses all of the features of **claim 1**:  
*Method of determining a parameter relating to image blur (abstract; image blur being caused by aberrations is parametrized in Zernike coefficients) in an imaging system (abstract), the method comprising the steps of:*
    - illuminating an object having a test pattern by means of the imaging system (paragraph 0094), thereby forming an image of the test pattern (implicit), the test pattern having a size smaller than a resolution of the imaging system (paragraph 0099; this pattern size is, in the light of the definition of resolution of the application; cf. page 4, lines 9 - 11 of the application smaller than the resolution of the imaging system), the test pattern being an isolated test pattern (a ring pattern; cf. figure 4), the image being blurred (deformation of the ring; cf. paragraph 103),
    - detecting the blurred image (paragraph 104), and
    - determining the parameter relating to the image blur (Zernike coefficient; cf. paragraph 0145) from a parameter (e.g.  $r_0$ ; cf. paragraph 0145) relating to the shape of the blurred image.

Therefore, **claim 1** is not novel.

The same applies *mutatis mutandis* to independent **claims 10 - 12**.

3. Dependent claims 4 and 7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty:

D1 discloses (figures 7, 8, paragraph 0118) the additional feature of **claim 4** of the aberration being determined from a parameter being related to the shape of the blurred image.

D1 discloses (abstract, figure 1) the additional features of **claim 7** of the object being a mask, the method comprising illuminating a resist layer by an image of the test pattern and forming a pattern relating to the blurred image.

4. The combination of the features of dependent claims 2, 3, 5, 6, 8 and 9 is neither known from, nor rendered obvious by, the available prior art.